

THAT WHICH IS CLAIMED

1. A rotary ram-in compressor comprising:

a stationary casing having at least one inlet passage for admission of working gases, and a receiver wherein pressurized gases collect;

5 a drive shaft supported for rotation in a given direction inside the casing by an arrangement of bearings; and

a rotor assembly comprising a first disk secured for rotation with the drive shaft and lying in a first plane transverse to the rotational axis of the drive shaft; a second disk lying in a second plane transverse to the rotational axis of the drive shaft, with the inner surfaces of

10 the two disks defining an annular space in-between; and a plurality of vanes arranged circumferentially within said annular space, each vane attached to both disks defining the annular space, each vane has a leading edge, a trailing edge, a concave surface and a convex surface, with the average angles of inclination of the successive portions of the vane with respect to a plane comprising the midpoint of the vane and perpendicular to a

15 radial plane including the rotational axis of the rotor and the midpoint of the vane decreases preferably gradually from its leading edge towards its trailing edge, within a range from about +2 to about -18 degrees, the opposing parts of the surfaces of each two adjacent vanes along with the opposing parts of the two disks' surfaces confined between the opposing parts of the surfaces of each two adjacent vanes defining a feeding channel
20 between them, each feeding channel has an inlet and an outlet, the cross sectional area of the inlet of each of the feeding channels being equal to the cross sectional area of its outlet, with means for active sweeping of the pressurized gases from the compressor's receiver being provided.

2. The rotary ram-in compressor of claim 1 wherein the means provided for active

25 sweeping of the pressurized gases from the compressor's receiver comprises a successive rotary ram-in compressor.

3. The rotary ram-in compressor of claim 1 wherein the means provided for active sweeping of the pressurized gases from the compressor's receiver comprises a successive

rotary ram compressor.

4. A rotary ram-in compressor comprising:

a stationary casing having at least one inlet passage for admission of working gases, and a receiver wherein pressurized gases collect;

5 a drive shaft supported for rotation in a given direction inside the casing by an arrangement of bearings; and

and a rotor assembly comprising a first disk secured for rotation with the drive shaft and lying in a first plane transverse to the rotational axis of the drive shaft; a second disk lying in a second plane transverse to the rotational axis of the drive shaft, with the inner

10 surfaces of the two disks defining an annular space in-between; and a plurality of vanes arranged circumferentially within said annular space, each vane attached to both disks defining the annular space, each vane has a leading edge, a trailing edge, a concave surface and a convex surface, with the average angles of inclination of the successive portions of the vane with respect to a plane comprising the midpoint of the vane and

15 perpendicular to a radial plane including the rotational axis of the rotor and the midpoint of the vane decreases preferably gradually from its leading edge towards its trailing edge, within a range from about +2 to about -18 degrees, the opposing parts of the surfaces of each two adjacent vanes along with the opposing parts of the two disks' surfaces confined between the opposing parts of the surfaces of each two adjacent vanes defining a feeding
20 channel between them, each feeding channel has an inlet and an outlet, each of the feeding channels converges from its inlet towards its outlet, with means for active sweeping of the pressurized gases from the compressor's receiver being provided.

5. The rotary ram-in compressor of claim 4 wherein the means provided for active sweeping of the pressurized gases from the compressor's receiver comprises a successive
25 rotary ram-in compressor.

6. The rotary ram-in compressor of claim 4 wherein the means provided for active sweeping of the pressurized gases from the compressor's receiver comprises a successive rotary ram compressor.